

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A muffler assembly for a pneumatic hand tool having a first exhaust outlet, the muffler assembly comprising:

a peripheral wall extending distally from the first exhaust outlet and defining an open distal end, the peripheral wall defining a volume, wherein the volume receives exhaust from the first exhaust outlet;

an upper plate adapted to fit snugly within the volume, the upper plate having a plurality of apertures;

a plurality of tubes, each tube extending distally from one of the upper plate apertures, each tube having an open proximal end, an open distal end, a sidewall having a plurality of apertures therethrough, and a blocking element disposed between the proximal end and the distal end of the tube;

a sound-deadening panel having a plurality of apertures, which apertures are sized and positioned to slidably engage the plurality of tubes and the sound-deadening panel is shaped to fit snugly within the volume defined by the peripheral wall; and

a perforated exhaust plate adapted to engage the distal end of the peripheral wall, thereby closing the distal end of the volume.

2. The muffler assembly of Claim 1, wherein the sound-deadening panels comprise a plurality of stacked panels.

3. The muffler assembly of Claim 2, wherein at least one of the stacked panels is made of a felt material.

4. The muffler assembly of Claim 1, wherein the upper plate and plurality of tubes are formed as a unitary structure.

5. The muffler assembly of Claim 1, further comprising a lower plate disposed below the sound-deadening panel, the lower plate having a plurality of apertures, each aperture disposed in proximity to at least one of the plurality of tubes.

6. The muffler assembly of Claim 5, further comprising at least one diffuser panel disposed below the lower muffler plate.

7. The muffler assembly of Claim 5, wherein the upper panel is adapted to direct the exhaust received from the first exhaust outlet into the plurality of tubes, and the blocking element in each of the plurality of tubes is adapted to direct the exhaust into the sound-deadening panel.

8. The muffler assembly of Claim 5, wherein the upper panel is formed from a plastic material.

9. The muffler assembly of Claim 5, wherein the sound-deadening panels comprise a plurality of stacked panels.

10. The muffler assembly of Claim 9, wherein each stacked panel is of unitary construction.

11. A muffler assembly comprising:  
a peripheral wall defining a volume having a proximal end that is adapted to receive an exhaust stream, and an open distal end;  
an upper plate adapted to slidably engage the peripheral wall, the upper plate having a plurality of apertures;  
a plurality of tubes, each tube extending distally from one of the upper plate apertures, each tube having an open proximal end, an open distal end, a sidewall having a plurality of apertures therethrough, and a transverse blocking element disposed between the proximal end and the distal end of the tube;  
a sound-deadening panel having a plurality of apertures that is adapted to slidably engage the plurality of tubes, the sound-deadening panel shaped to fit within the volume defined by the peripheral wall; and  
an exhaust plate adapted to engage the distal end of the peripheral wall, thereby closing the distal end of the volume.

12. The muffler assembly of Claim 11, wherein the sound-deadening panels comprise a plurality of stacked panels.

13. The muffler assembly of Claim 12, wherein at least one of the stacked panels is made of a felt material.

14. The muffler assembly of Claim 11, wherein the upper plate and plurality of tubes are formed as a unitary structure.

15. The muffler assembly of Claim 11, further comprising a lower plate disposed below the sound-deadening panel, the lower plate having a plurality of apertures, each aperture disposed in proximity to at least one of the plurality of tubes.

16. The muffler assembly of Claim 15, further comprising at least one diffuser panel disposed below the lower muffler plate.

17. The muffler assembly of Claim 15, wherein the upper panel is adapted to direct the received exhaust stream into the plurality of tubes, and the blocking element in each of the plurality of tubes is adapted to direct the exhaust into the sound-deadening panel.

18. The muffler assembly of Claim 15, wherein the upper panel is formed from a plastic material.

19. The muffler assembly of Claim 15, wherein the sound-deadening panels comprise a plurality of stacked panels.

20. The muffler assembly of Claim 19, wherein each stacked panel is of unitary construction.